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**MOTIVES AND CONSEQUENCES OF MERGERS AND ACQUISITIONS IN THE
AIRLINE INDUSTRY**

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1 INTRODUCTION

1.1 Introduction to the topic and industry background

Air transport industry has seen significant consolidation since the 1980s. In 1978, the Airline Deregulation Act was passed in the United States. This act opened the markets in the airline industry and allowed airlines to, for example, set fares more freely and made mergers more feasible. (Siegmund, 1990.) Similar progress has also followed in Europe with deregulating acts being introduced in the late 1980s and early 1990s, with full liberalisation taking effect in 1997. (Németh & Niemeier, 2012; Suau-Sanchez et al., 2016.) The same phenomenon can be seen almost everywhere in the world, even in China, despite being a vastly different market (Zhang & Round, 2008).

Consolidation within the air transport industry is caused by airlines conducting mergers and acquisitions (M&A) but also by bankruptcies, which are quite common occurrence among airline businesses. Therefore, the overall scale of operations is handled by fewer but larger entities. With the economic situation and market conditions getting tougher, mergers and acquisitions show no sign of ceasing as new cases come up constantly. Covid-19 crisis posed an unforeseen threat for airlines despite government bailouts as passenger numbers and revenue dropped significantly (Lee, 2021, pp. 703–704). Airlines are likely to continue pursuing improvements in efficiencies, not just to survive but also eventually to seek maximizing the shareholder value, which is widely considered to be the primary task for commercial businesses.

Mergers and acquisitions can be used as tools to achieve these goals. M&As have a wide variety of influence over many stakeholders, and past literature has discussed many motives and consequences of them besides the above-mentioned survival and profit maximizing. This study aims to create a comprehensive picture of the pre- and post-merger drivers and effects, focusing on the airline industry. These include reviewing effects on market power, efficiencies, and financial positions, along with changes to fares and service quality.

Attention is paid not only from the perspectives of the companies themselves but also from the perspectives of other stakeholders, such as customers and employees. For

example, changes in market power can have a negative impact on employees should airlines threaten to outsource the cabin crew in markets where few alternative employers exist. Furthermore, in markets where few competitors exist, airlines could use excessive bargaining power on suppliers whose businesses could be rendered unfeasible as a result of unprofitable contracts. Airlines are also important for remote economies and societies to connect them to the world. Should an airline be acquired, the new management could terminate service to these areas on the basis of cutting inefficiencies.

On the other hand, lots of jobs could be saved if an airline on the verge of bankruptcy is saved by getting acquired. These are among the factors that antitrust regulators examine to determine the positive and negative effects of potential airline mergers and acquisitions. This study is built around theoretical frameworks and empirical evidence from past literature mainly from the United States and Europe on potential motives, effects, and outcomes of airline M&As.

1.2 Purpose of the research and research questions

This research is conducted to better understand the key motives and potential consequences of airline mergers and acquisitions. The results can be used, for instance, to aid and evaluate decision making by airlines. The results can also help to evaluate whether mergers and acquisitions have pro- or anti-competitive effects for consumers, a phenomenon that is carefully examined by anti-trust agencies. Blocking of mergers has indeed happened on multiple occasions; for example, the European Commission blocked the merger of Ryanair and Aer Lingus for concerns over reduced competition in 2007 (Dobson & Piga, 2013).

Past research has landed on quite opposing conclusions concerning whether airline mergers and acquisitions have improved or reduced competition, thus affecting consumers. For example, a study by Carlton et al. (2019) and a study by Dobson and Piga (2013) conclude that airline mergers have had a pro-competitive effect, resulting in reduced fares and increased flight frequencies. However, papers by Brueckner and Pels (2005) and Kwoka and Shumilkina (2010) indicate the opposite with mergers resulting in anti-competitive effects such as increased fares.

This study looks to create an overall view of the different driving motives behind mergers and acquisitions and the effects that follow, evaluating disputes among scholars. It also joins the debate on what kinds of consequences may be more likely than others, based on the existing literature and evidence, and could even shed light on future developments. On the basis of these tasks, the research question is set to be:

What are the possible consequences of airline mergers and acquisitions from the perspective of the companies and customers?

However, it is also important to understand the motives and perhaps even pressing needs that may lead to these mergers and acquisitions so that it is easier to evaluate the situation pre- and post-merger. This topic can be demonstrated by the following, additional research question:

What are the driving factors that motivate airline mergers and acquisitions?

1.3 Methodology

The research method chosen is a narrative literature review with a qualitative approach. First, an overall picture of the topic was created by reviewing existing literature on M&As and studies related to M&As by airlines. Then, information was gathered in the order of this study, starting with M&As as a phenomenon, continuing with the conditions and drivers leading to airline M&As, and finally researching the effects of airline M&As. Supporting information and literature were constantly read throughout the work to reinforce knowledge on certain subjects. Some relevant search terms used were *mergers and acquisitions, alliance, airline, air transport, drivers, motives, effects, impact, competition, synergies, market power, deregulation, efficiency, integration*.

Tools in the search engines were used to combine and modify the terms to achieve better results. “AND” and “OR” -commands were used to combine terms, and an asterisk was used on proper points in the terms to avoid cutting out relevant results for the reason of words being in improper forms. To demonstrate this, finding results including the words *driving* or *drivers* were found using term *driv**.

The material was mainly gathered from two databases: ScienceDirect by Elsevier and Ebsco-databases. Google Scholar was also used as a powerful tool to probe for relevant articles. However, special attention had to be paid when using Google Scholar to evaluate the scientific standards of the results found. It is used more as a search engine than a database, meaning that usually the results found in Google Scholar could be found in the two main databases used, ScienceDirect or Ebsco. Of course, critical evaluation must be conducted when searching for any material. Next, the methods used to evaluate the quality of sources will be presented.

Filtering the results to peer-reviewed articles is a useful tool to increase the quality of material used. Besides filtering results and critical evaluation, two platforms were used to confirm the quality of the sources. First, Scopus is a database that allows further filtering of the results. It also shows the number of previous citations of a given article, perhaps indicating of the popularity and reliability of the work. Second, JUFO-portaali is a Finnish service that evaluates the scientific standards of platforms and journals where given articles are published. For instance, the Journal of Air Transport Management was widely used for this study. On a scale from one to three, it gets one on JUFO-portaali, meaning that it meets the basic quality requirements for scientific publications.

1.4 Structure of the study

The first chapter, introduction, gives a brief insight on the situation and current developments in the industry. As established, the air transport industry has seen consolidation through mergers and acquisitions, making it a timely topic. The introduction also explains further arguments why the research topic is relevant, finally formalizing the purpose in the form of research questions. The methodology used in the research is also presented in the first chapter, explaining the type of research and the process of gathering information and reviewing past literature on the topic.

In the second chapter, mergers and acquisitions are explained as a general phenomenon, and theoretical contemplations are made around the topic. It provides a foundation for the study by defining central frameworks that are needed in order to

understand the patterns and contexts in the study. It also evaluates the existing knowledge and disagreements on the topic of mergers and acquisitions.

In the third chapter, the frameworks are used to examine the various characteristics of airline mergers and acquisitions, specifically the driving factors behind them and the benefits and drawbacks for airlines that choose to conduct a merger or acquisition. In the fourth chapter, the resulting effects of M&As are investigated. Also, it is contemplated on whether customers would be better off with or without the merger. Both of these chapters are based on a thorough review of previous literature on theories and empirical research on airline mergers and acquisitions.

In the final chapter, conclusions are drawn from the results and findings. The separate findings in the third and fourth chapters are combined to speculate on the total anticipated and realized effects of a merger or acquisition. For example, the findings of changes in fares are combined with the changes in product quality to contemplate on the total effect on consumer welfare. Additional viewpoints are presented from the points of view of other stakeholders, such as employees and antitrust authorities. Finally, suggestions for further research are presented, along with a discussion of the limitations and reliability of this study.

2 MERGERS & ACQUISITIONS

The purpose of this chapter is to construct the theoretical framework needed to analyse the impact and strategic choices of airline mergers and acquisitions in subsequent chapters. Key concepts are defined, and various theoretical approaches to motives for mergers and acquisitions are considered.

2.1 Definitions

2.1.1 Mergers, acquisitions, and alliances

Merger happens when at least two businesses decide to combine and fuse together to form a single legal entity, usually in the form of a company. (Georgios & Georgios, 2011; Van Horne & Wachowicz, 2008, p. 604) Mergers are the most common type of cases that are analysed in this study. An example of a merger within the airline industry is the merger of British Airways and Iberia in 2011 which formed International Airlines Group, also known as IAG (Merkert & Morrell, 2012, p. 854). Even though the legal entities were merged, the brands remain separate.

Georgios and Georgios (2011) define *acquisitions* as a similar transaction, however, a typical characteristic of an acquisition is when a distinctively larger company purchases a smaller company and acts as an owner of the acquired entity. As a result, the acquired company loses its independence over legal and economic matters (Schosser & Wittmer, 2015).

Strategic *alliances* are cooperative arrangements between businesses. Contrary to mergers and acquisitions, the participating businesses keep their independence. Alliances usually require fewer financial resources than mergers or acquisitions as alliances may not involve buying equity from partners. When mutual equity is used in an arrangement, it is known as a joint venture. (Wheelen et al., 2015, pp. 221–227.)

Motives for alliances are often similar to those for mergers or acquisitions, which revolve around sharing resources to achieve mutual economic gain. Resources may consist of, for example, tangible assets or technology. (Tsang, 1998.) Indeed, the

benefits of alliances versus mergers or acquisitions are a common topic of debate, which will be revisited in the fourth chapter of this study.

Morrish and Hamilton (2002) distinguish the following key motives for alliances in the air transport context: code sharing, block spacing, shareholding, and franchising. Code sharing implies selling tickets on participating airlines' websites for flights operated by other participating airlines. Block spacing, according to Morrish and Hamilton, is the allocation and reservation of seats on a flight for use by another airline. Code sharing and block spacing both aim to improve load factors of airlines, thus improving efficiencies. Load factor means the extent to which aircraft are filled, meaning that fewer empty seats results in a higher load factor. Shareholding refers to acquiring equity in another participating airline. It may enable the acquirer to access, for example, the target airline's networks and customer service. Franchising enables usually a smaller, domestic, or lesser-known airline to use the brand of a more popular airline in exchange for royalties.

Currently, the three most significant airline alliances are Oneworld, SkyTeam and Star Alliance. As of 2023, they consist in total of 59 airlines, indicating that they are a much more popular way of cooperating (Oneworld, 2023; SkyTeam, 2023; Star Alliance, 2023). This is due to alliances requiring less commitment and capital than M&As while still potentially extracting benefits from cooperation.

2.1.2 Horizontal and vertical mergers and acquisitions

Growth or integration is often distinguished as either horizontal or vertical. The same principle by which they are separated also determines whether a merger or acquisition is horizontal or vertical. It is important to make a distinction between these as motives for mergers and acquisitions may fundamentally vary depending on which kind of merger or acquisition is considered.

Integration or growth is vertical when a business decides to integrate a certain operation or function to itself that was not part of the core business previously, thus reducing outsourcing. (Wheelen et al., 2015, pp. 222–224.) Vertical integration is often similarly known as internalization. In other words, a business is taking control of a

longer portion of the value chain. To better emphasize this with an example, vertical integration happens when a coffee shop starts to farm coffee by itself, rather than outsourcing raw coffee from a supplier like it used to. This is a case of vertical organic growth, however, the same principle applies to a vertical merger or acquisition, in which case the function is purchased rather than built from scratch.

Horizontal expansion happens when a business grows a function within the same position in the value chain. According to Wheelen et al. (2015, pp. 225–227), horizontal growth is defined as expanding operations to new locations or increasing the quantity or variety of current products and services. Again, expansion can happen through organic growth, meaning that capacity is expanded by the business itself, or by acquiring another company. This study mainly focuses on airlines merging or acquiring another airline, meaning that they are cases of horizontal M&As.

2.1.3 Synergies

Synergies are the excess value added when two businesses are combined (Sacui & Maticiuc, 2020). Schosser and Wittmer (2015) determine that synergies generally stem from the increase in overall efficiency of the new organisation. The combined entity's value, or ability to create value, is greater than the value of the individual businesses' values added together. Suppose firm A's value is a hundred million euros and firm B's value is two hundred million euros. The firms merge, and the total combined value is 350 million euros, creating excess value or synergies of 50 million euros.

Schosser and Wittmer (2015) illustrate a division between cost and revenue synergies. Cost synergies derive from the elimination of excess functions in the new organisation, or from the removal of duplicates of certain functions that existed in both businesses before the cooperation. For instance, the combination of customer service assets is likely to yield efficiency gains; the same output is achieved with fewer resources. Respectively, Sacui and Maticiuc (2020) argue that revenue synergies are created when the new organization is able to generate more revenue than what the businesses could generate separately. This usually happens because either higher revenues are generated with fewer resources, or the combined entity is able to sell more units. The new organisation may better utilize complementary and unique resources found within

both organisations to improve production efficiency, leading to revenue synergies (Tanriverdi & Venkatraman, 2005).

These terms may overlap each other, however, they can be defined to fundamentally stem from two different perspectives: on the cost synergy side, fewer resources are required to produce the same value. On the revenue synergy side, the same resources create greater value, or an increase in resources results in disproportionately higher returns. Often these are linked to economies of scale, meaning that unit costs can be lowered with larger capacity. Overall, synergies are absolutely one of the most important motives for seeking mergers and acquisitions. Concrete factors that yield synergies for airline M&As are discussed in more detail in the later chapters.

2.2 Motives for mergers and acquisitions

In this subchapter, theoretical perspectives for firms and their environments are presented. A resource-based view is discussed first, followed by a market power view, after which some financial and strategic aspects are considered. Effects and motives for mergers and acquisitions are discussed based on these frameworks, while some concrete instances are noted.

Most motives are linked to these views, for example, acquiring resources could enable synergies, and possessing greater market power could lead to further cost efficiencies. It should be noted that mergers and acquisitions are not based on a single rationale but rather on a combination of different motives and views, including aspects from these frameworks. Of course, other motives still exist, and some motives are a combination of these views. For a further example, acquiring new resources and gaining stronger market power allows for faster growth. Mergers and acquisitions serve as a strategic tool to achieve fast and substantial growth or an improved financial stance through higher capital investments, as will be shown by these frameworks.

2.2.1 Resource-based view

Resource-based view, in principle, is the theory on the most efficient usage of the different resources and abilities that an organisation has in order to achieve sustainable

competitive advantage (Cooper et al., 2023; Sacui & Maticiuc, 2020). Barney (1991) defines competitive advantage as a condition in which a firm has a method of creating value that is unique to a certain firm only, and other firms are not able to imitate it. Furthermore, according to Barney, firm's resources consist of its assets, knowledge, and organisational capabilities. Therefore, besides tangible assets like raw materials and machinery, technologies and the structures within the organisation are considered as resources, thus being important for achieving competitive advantage.

As established, resources are a fundamental factor for achieving competitive advantage. Sacui and Maticiuc (2020) argue that M&As can be used as a tool to gain new resources and develop existing ones. Resources are generally divided into two categories: new and unique resources and complementary resources, both of which are discussed in their respective orders from the point of view of firms.

Developing new resources, i.e., assets, skills, and organisational abilities in house could be time consuming or relatively expensive should thorough research and development be required. This creates a motive to acquire a firm that already has the necessary resources. Besides obtaining new technologies and capabilities, internalization or vertical M&As could be a valid reason to seek the acquisition of a firm to obtain production factors that previously had to be outsourced. This could lead to, for example, a reduction in the costs of raw materials through cutting out intermediaries and the ability to control the materials to better meet the needs of the core business and products.

Developing existing resources by acquiring new but similar resources and increasing the number of existing resources is known as complementary resources. (Sacui & Maticiuc, 2020.) The new, complementary, and combined resources of merging firms function as a driver for synergies in mergers and acquisitions via improved efficiency and economies of scale, which ultimately help the firm to achieve a sustainable competitive advantage. Antitrust authorities likely support mergers and acquisitions with these motives, should they yield gains in technical and economic progress via improved resources, which could eventually benefit customers through improved efficiencies and synergies (Németh & Niemeier, 2012). Customers could benefit from lower prices, higher-quality products or services, or, in the best-case scenario, both.

2.2.2 Market power view

From the perspective of a firm, the elimination of competition is a common motive for M&As. The market power of a firm indicates its status and strength in comparison to its competitors. Generally, the larger the firm, the greater market power it has. Market power is typically restricted to a single industry or geographic location. Market power enables better pricing ability and the control of output for the firm. (Devos et al., 2009; Hankir et al., 2011; Shahrur, 2005.)

The amount of market power has implications for various stakeholders, mainly consumers, competing firms, and suppliers (Hankir et al., 2011). On the condition that a firm has great market power, it can better exercise price setting. Should a consumer have few options in a certain market, it must act as a price-taker from a business with ample market power, potentially leading to a reduction in customer welfare and increased revenue for the firm. Concretely, consumers may face higher prices for the products or services. Alternatively, they may face reductions in product or service quality, potentially in combination with changes in pricing.

Similar effects can be seen from the perspective of competing firms, as they must price their products similarly should they not be able to achieve sustainable competitive advantage by other means. Furthermore, Devos et al. (2009) note that suppliers could have diminishing negotiation power in relation to their customer firm, forcing them to accept the price that the firm with ample market power is willing to pay. Greater bargaining power could yield cost efficiencies for firms with significant market power through lower prices paid for raw materials and components.

All these conditions make pursuing market power seem highly favourable for firms, as they seem to yield cost and revenue efficiencies. Market power stems from a dominant position in terms of market share, or a lack of competition. Mergers and acquisitions can be used as a tool to acquire competitors, making them a compelling reason to pursue M&As.

Of course, the significance of these effects depends on how competitive the market is before and after a merger or acquisition. The existence and significance of these effects

are, however, somewhat disputed in the literature. Hankir et al. (2011) research motives and investors' beliefs for M&As in the banking industry. The study concludes that in about 10% of cases in the study group, market power exploitation is the dominant motive for the mergers and acquisitions. Additionally, more investors believe in gains from market power exploitation than in other motives, according to Hankir et al.

On the contrary, studies by Shahrur (2005) and Fridolfsson and Stennek (2005) on horizontal M&As in various industries suggest that even competing firms that are not part of the M&As may benefit from other firms' mergers if they result in increased prices. From the point of view of suppliers, they are still usually worse-off, as the studies by Hankir et al. (2011) and Shahrur find negative effects for suppliers as merged entities can exercise greater negotiating power. Besides the external effects on other stakeholders, Shahrur and Fridolfsson and Stennek, argue that increasing market power is usually not the most important motive for M&As, as they find that efficiencies and synergies are most of the time the most prominent motives.

If a merger or acquisition does lead to reduced competition, it could lead to an increased threat of new entrants (Fridolfsson & Stennek, 2005). If the merged firm were to increase the pricing of its products or services, it could create an opportunity for new entrants to be profitable or compete with lower prices. Perhaps paradoxically, M&As can also be used as a tool to reduce the threat of a new entry by pre-emptively acquiring a firm that could enter its market (Kwoka & Shumilkina, 2010). However, entering the airline industry has exceptionally high barriers of entry as it requires immense amounts of capital and various permits. The threat is primarily posed by airlines expanding into new geographical markets, rather than by new startups.

Intuitively, these effects sound highly anti-competitive. The purpose of antitrust authorities is to inspect proposed mergers and acquisitions and determine whether they would impose anti-competitive effects. Besides the blocking of proposed mergers and acquisitions, antitrust authorities can impose conditions and limitations for M&As that could alleviate their anti-competitive effects. These conditions or limitations often aim to make competition and new entries more feasible.

As with the airline industry, capacity at airports is measured in slots, meaning that an aircraft needs a timeslot to land, use infrastructure, and take off again. If an airport is at capacity, which means there are no more slots available, antitrust authorities can, for example, demand that merging airlines give up slots in order to lower barriers to entry for new entrants. For example, in the merger of United and Continental airlines, the American antitrust authority, the Department of Justice, ordered the merging airlines to lease 18 slots at Newark Liberty International Airport for the competing Southwest Airlines (Le & Yimga, 2019). Similarly, Swissair had to give up slots at Geneva and Zurich airports after its merger with Sabena due to a decision by the EU Commission (Németh & Niemeier, 2012).

Some other alleviations are limitations in flight frequencies and coordinated price reductions, meaning that if a price on some route is reduced post-merger, antitrust authorities may order the airline to reduce the price on some other route accordingly. (Németh & Niemeier, 2012, pp. 46–47.)

2.2.3 Financial, strategic, and alternative motives

The purpose of businesses is to maximize returns and shareholder value. This could induce strategic decisions, such as pursuing growth, to achieve these goals. The resources and market power gained through mergers and acquisitions are tools to ultimately achieve better financial performance. Merging can also yield efficiencies in financial matters such as taxation and financial structuring, besides the efficiencies gained in production (Shrieves & Stevens, 1979). These by themselves could function as a source of synergies and improved returns, but they could also help a company that is in danger of a default to survive if acquired, as is discussed next.

A business may be facing financial distress or even bankruptcy, which could prompt it to seek being acquired to resolve those problems. This assumption is confirmed in the literature, as a paper by Pastena and Ruland (1986) suggests that the shareholders of the distressed firm are better off avoiding bankruptcy because the stock of the firm will continue to keep some of its value, besides avoiding various costs such as legal and administrative costs linked to bankruptcies. An earlier study by Shrieves and Stevens (1979) deemed that 15.2% of the merged firms in the study sample were near

bankruptcy, thus indicating that avoidance of bankruptcy is indeed a strong motive for mergers and acquisitions, besides the potential existence of other motives. Shrieves and Stevens also note that merged firms can better carry debt together than separate ones; however, tax benefits should outweigh the costs related to debt. Alleviation of financial problems also seem to be a motive for some airline M&As, which will be discussed in the third chapter.

Mergers and acquisitions can change the risk profile of a company even if it is not insolvent or on the verge of bankruptcy. Risks can be reduced through, for example, diversification and reducing uncertainties in cash flows. A study by Garfinkel and Hankins (2011) confirms that risk management is a valid motive for M&As. However, the study mainly examines vertical M&As, so the motives can differ from those of horizontal M&As, which are the focus of this study. Changes in the amount of risk have consequences for the business beyond avoiding undesirable financial outcomes; for example, they can affect the firm's cost of capital. Lower risks resulting in a lower cost of capital reduces the costs of debt, thus increasing the wealth of the firm. Additionally, investors require smaller returns for smaller risks. (Evripidou, 2012; Shrieves & Stevens, 1979.)

Conclusions are, however, mixed in the literature as to whether M&As actually increase or decrease the systematic, unsystematic, or total risks of the firm. Studies by Vallascas and Hagendorff (2011) and Amihud et al. (2002) on bank mergers conclude that, on average, bank mergers do not alter the total risks of the merging banks. The study by Vallascas and Hagendorff adds that, should the banks be relatively safe before the merger, the merger could in fact increase the risk of a default. On the contrary, Chen and Tan (2011) research the risks on bank and insurance company mergers and acquisitions in Europe using stock valuations. Their study shows that while the companies' total risks still remained the same compared to the world, systematic risks significantly reduced when compared domestically. As for cases of airline mergers and acquisitions, the effects on risks continue to be mixed. These will be analysed more in the following chapter.

These risks are firm-specific and structural. It should be noted that mergers and integration processes themselves may be risky. These risks stem from likes of

asymmetrical information, liabilities of foreignness, costs associated with combining different functions such as IT-systems, and organisational conflicts. (Merkert & Morrell, 2012.) A proper integration process must always be implemented after mergers and acquisitions to realize their potential benefits. This also highlights the importance of due diligence before M&As to make sure that integration can be done beneficially and that the new resources are relevant or complementary. Synergies are not realized immediately, but rather achieved in the long-term.

3 DRIVING FACTORS FOR AIRLINE MERGERS & ACQUISITIONS

As previously stated, companies' motivations for mergers and acquisitions can vary depending on their position in their environment and strategic choices. Based on previous cases and theories, special attention is now paid to the reasons why airlines may seek mergers and acquisitions.

Fundamentally, airlines do not differ from other private companies, and depending on the current situation of an airline, M&As function as a tool to achieve economic gains; either profit maximization or, in worse case, avoiding bankruptcy. Drivers such as cost efficiencies or improvements in market power are intermediate tools to progress towards either of these goals. These motives are interlinked: an airline may have a motive to reduce its fuel costs in order to improve its financial situation, which in turn can be achieved through greater market power. As noted, market power enables better bargaining on suppliers, thus creating cost efficiencies.

3.1 Improvements in efficiencies

Acquiring new and complementary resources is one of the main motives for mergers and acquisitions. Also, cutting out excess redundancies can yield efficiency gains and facilitate both cost and revenue synergies, ultimately rendering the company more profitable. Airline mergers and acquisitions do not seem to be an exception to these assumptions.

Gains in efficiencies from airline mergers and acquisitions are widely examined in the past literature, for example in papers by Le and Yimng (2019), Evripidou (2012), and Merkert and Morrell (2012). The purpose of this subchapter is to examine the concrete factors through which airlines seek to make efficiency gains leading to synergies. These happen through both cost and revenue synergies. Furthermore, these synergies can be achieved both through efficiency gains in variable costs, such as fuel, and fixed costs, such as insurance and IT-services. The most prominent factors relate to economies of scale, which enable more efficient usage and procurement of resources, and improvements in flight management and networks, which lead to efficiency gains in flight operations.

Starting with the better usage and procurement of resources, M&As tend to lead to larger organisations, which often benefit from economies of scale. Economies of scale usually enable reductions in variable costs, thus yielding efficiency gains and synergies. Research by Le and Yimga (2019) confirms this assumption through their study on the airline mergers of United and Continental, and Delta and Northwest. They find that both airlines experience decreases in marginal costs. According to Le and Yimga, most cost efficiency gains for United/Continental are from markets where they did not previously compete, but cost efficiencies for Delta/Northwest are from markets where they did compete previously. This indicates that synergies can be achieved from streamlining operations and with a more efficient usage of resources in cases where they were not previously competing, and not just from decreased competition, which would enable higher markups. However, potential efficiencies are to be gained in the long-term, as will be demonstrated in the fourth chapter.

Functions that enable synergies and efficiencies for airlines are examined from both cost and revenue standpoints. First, cost synergies are considered. When mergers and acquisitions happen, many redundancies are created within the organisation. Airlines have various support functions that, when combined with new acquisitions, allow for a more efficient usage of labour. Employees can be more productive, or the number of employees can be reduced in places where redundancies exist. (Schosser & Wittmer, 2015, p. 144.) Yet, Merkert and Morrell (2012) point out that when airlines merge, labour unions may try to negotiate higher salaries or move to the other airline's higher-paying contract. Some of these functions are customer service, catering, training, maintenance, flight operations and planning, and marketing.

Market power, bargaining power, and economies of scale enable cost savings through more efficient procurement. For example, airlines may be able to negotiate a lower unit price on tangible resources like fuel, spare parts, ground handling, and even on aircraft when purchased in larger quantities by a larger (merged) organisation. Airports also charge fees on landings, take-offs, and slots, which can be negotiated for a lower price. Furthermore, the combination and joint efforts on supporting infrastructure like IT systems are likely to yield cost savings in the long run. (Evripidou, 2012; Merkert & Morrell, 2012; Schosser & Wittmer, 2015, p. 144.)

Flight operations and networks are one significant entity that can generate both cost and revenue synergies. According to Merkert and Morrell (2012), one key source of synergies for airlines is an increase in load factors, which means that flights are generally more fully booked. A paper by Brueckner and Pels (2005) agrees, as they suggest that after two airlines have merged, excess capacity, i.e., the number of flights, is reduced. Merkert and Morrell also point out that fewer but larger aircraft can be used on routes where merged or acquired airlines previously operated. This leads to a reduction in inefficiencies as fewer empty seats are present on flights. As a result, the consumption of fuel and fees set by airports are reduced per passenger. Schosser and Wittmer (2015) agree on these assumptions as they note that these effects are achieved through better scheduling and network planning. This phenomenon is called economies of density, which means that the more efficient usage of resources, in this case aircraft, results in lower costs per customer. Costs per passenger reduce as the volume of passengers rises or the efficiency of flights increases (Brueckner & Pels, 2005).

Companies have the possibility of acquiring new technologies through M&As. For airlines, new technologies could enable better network and route planning. Better planning can in turn cut inefficiencies, for example, by terminating inefficient routes and hubs. (Evrpidou, 2012.) Hubs are airports that airlines use as an origin for a significant number of their flights. For example, Helsinki serves as a hub for Finnair, as the airline originates most of its flights from Helsinki. Moss (2013) points out that synergies are gained by airlines not only from cost savings but also through revenue synergies, as the combination of airlines is projected to create flight network benefits. Efficiencies are to be gained as the routes of the acquired airline may better supply passengers to the existing hubs, and customers can take connecting flights within the same airline.

Network benefits stem from a wider offering for consumers. When airlines merge, they eventually acquire the resources that the counterpart had, which enables the new entity to combine the networks (Moss, 2013). This links to market power and competitiveness, as customers have a wider selection of destinations and frequencies within the same airline. Despite the potential reduction in the number of airline options, customers deem better networks more attractive when choosing an airline.

The combined airlines may exercise coordinated pricing, potentially increasing markups and thus revenue synergies (Schosser & Wittmer, 2015, p. 144).

Finally, revenue synergies can be achieved simply by increasing capacity and flights through more efficient usage of aircraft and hubs. When airlines merge, they gain access to the other airline's slots and aircraft. It allows for more flights and better schedule and network harmonization, implying that if resources are increased, they may yield greater and more efficient returns. Also, acquired airlines likely already possess the required regulatory permits, enabling wider operations. (Schosser & Wittmer, 2015.)

3.2 Market power

Airlines merging and acquiring other airlines tend to result in increased market power. As noted previously, increased market power enables better bargaining power relative to its suppliers of raw materials and, for example, airports, thus creating synergies. Changes in market power could also transform airlines' competitive environment. This subchapter examines the changes and effects on the competitive environment of airlines, as well as how airlines may view market power as a motivator for a merger or acquisition.

A study by Le and Yimga (2019) confirms that increases in market power do exist after airline mergers. The combined effects of increases in efficiencies and market power will likely result in increased margins. Le and Yimga find that price markups increased on average for both the United/Continental and Delta/Northwest mergers on markets and routes where they were competing prior to the mergers. However, they conclude that market power effects and reduced consumer welfare could only be seen on markets where they were competing before the merger.

The elimination of a potential new entrant is one motive for airline mergers and acquisitions. Kwoka and Shumilkina (2010) discover that even potential competitors can influence airline pricing, lowering markups and creating a motive for airlines to eliminate competition. An earlier study by Goolsbee and Syverson (2008) agrees on this assumption as they find on a case that airlines do decrease their pricing prior to

low-cost carrier Southwest entering the market. According to Kwoka and Shumilkina, this phenomenon applies both ways as airlines may increase their pricing on routes where the acquired airline was a potential entrant before the acquisition. Hüscherlath and Müller (2015) add that as long as fast and easy entry to the market remains after acquisitions, airlines' ability to exercise market power stays limited.

It is important to note that especially the elimination of competition and market power cannot, or perhaps should not, be the sole motive for a merger or acquisition. Should the firms or airlines be able to exercise excessive market power post-merger, the deal would be prevented by antitrust authorities. Still, the literature is mixed on whether airlines have been able to raise consumer prices, which will be examined in the fourth chapter. Despite the role of antitrust authorities, Kim and Singal (1993) suggest that increasing market power is the prevailing effect and motive during mergers and acquisitions of financially healthy airlines, even surpassing efficiency gains that could be seen later after the completion of the merger. It is evident that market power is a motive for airline mergers as it may enable airlines to increase markups due to lessening competition, reduced service, and better economies of density. However, it does not necessarily result in increased customer prices, as in the fourth chapter it will be discussed whether the gains in efficiencies are enough to offset the increased market power. Market power still remains as a beneficial motive for M&As from the perspective of airlines.

The strength of market power depends on the amount of competition in a given market after the merger. Should little competition exist after the merger, airlines would be able to exercise their market power more, potentially strengthening the motive. Kim and Singal (1993) note that market power can be better exercised on longer routes, as customers are not able to substitute traveling by other means, such as trains or cars. Longer routes also often have fewer competitors that offer direct routing. Passengers prefer direct service over connecting routes, thus making switching less preferable and enabling airlines to charge a premium. On shorter routes, the effects may be less prominent. Aligned with Kim and Singal, Ho et al. (2021) find positive abnormal returns on the stocks of competing domestic airlines and a railway service provider after the merger of China Eastern and Shanghai Airlines in the Chinese market. The effect confirms that consumers are expected to potentially switch to competitors from

the merging airline on shorter routes, which limits the market and pricing power that the merging airline can exercise. Again, even though airlines may exercise market power on longer routes, it may not directly lead to reduced consumer welfare. For example, airlines may be able to offer better networking and more direct flights, indicating of increased product quality, despite potentially increased pricing.

3.3 Financial aspect

If an airline is poorly managed or facing severe financial instability, it can seek to be acquired by a well-run airline to avoid bankruptcy (Zhang & Round, 2008). Zhang and Round point out multiple such cases in which the motive was to financially heal the organisations. In 1993, Northwest Airlines in the United States was partially acquired by KLM due to being financially unstable. Furthermore, Qantas partially acquired Air New Zealand for similar reasons. A study by Schosser and Wittmer (2015) suggests that, especially in Europe, airlines merge pre-emptively to avoid bankruptcy and more severe problems. They cite the mergers of British Airways and Iberia (IAG) and Air France and KLM (Air France-KLM), both of which merged while their operating margins were worse in comparison to other similar airlines.

On the contrary, Schosser and Wittmer (2015) compare the European cases to the American mergers of Delta, United, and Northwest. The airlines merged after they had filed for Chapter 11 bankruptcy, suggesting that North American airlines may merge in order to regain competitiveness after financial troubles. American Airlines and US Airways merged while American Airlines was in bankruptcy (Das, 2019). Schosser and Wittmer speculate that these differences in motives regarding financial trouble may be due to differences in regulation. Bankruptcies in the United States allow for more restructuring rather than just asset liquidation, as is the more common practice in Europe (Morrell, 2007, pp. 220–225).

While Zhang and Round (2008) and Schosser and Wittmer (2015) determine that surviving is a motive itself, Merkert and Morrell (2012) confirm and expand this statement by defining situations that could lead to poor performance, such as too heavy competition and inefficient operations. Schosser and Wittmer suggest a cause for the heavier competition to be the rise of low-cost airlines. Poorly performing airlines are

likely not in a position to acquire competitors to ease their situation in a competitive environment but would rather be acquired by a competitor. Besides heavy competition, Schosser and Wittmer also point out the trouble of rising fuel costs, potentially forcing airlines to seek cost synergies enabled by M&As.

The typical discussion stance is how well-performing airlines could increase their profitability further, for example, through M&As. However, the motive of being acquired is usually from the perspective of a worse performing airline willing to just save itself by being even partially acquired. Merger and acquisition deals can be accepted on this basis by the antitrust authorities even if they would result in less competition (Merkert & Morrell, 2012). Saving an airline has positive externalities, such as the saving of jobs, that could offset the potential negative externalities of lost competition.

On the other hand, airlines, as private businesses, are willing to maximize shareholder value and returns. Ho et al. (2021) note that, in theory, firms including airlines, do not enter mergers if they are not expected to yield returns. Shareholders agree on this assumption, as with the merger of China Eastern and Shanghai Airlines, both airlines' stocks faced positive abnormal returns after the merger announcement, indicating that the market and investors also see mergers as financially beneficial. Similar results are found earlier by Singal (1996) in a study of US-based airline mergers. Further, European M&A cases of IAG, Air France-KLM, and Lufthansa's various acquisitions show shareholders and investors positively valuing mergers (Hsu & Flouris, 2017). From the companies' financial standpoint, they gain access to the acquired airline's cash flows and financial assets, besides gaining market share.

As noted, mergers and acquisitions can also alter the firm's risks and thus affect, for example, the cost of capital and therefore the financial stance of the company. Evripidou (2012) analyses the systematic risks through stock price alterations after the mergers of five European and American airline mergers. The findings are mixed, however, with the results showing that three of the five airlines, Lufthansa, SkyWest, and United, managed to reduce their risks after merging with their counterparts, thus being beneficial. Air France and Delta, on the other hand, showed increased risks after merging with their counterparts, possibly indicating that the mergers were not

beneficial from this perspective. This challenges risk management and reduction as a motivator for airline mergers or acquisitions.

3.4 Additional resources

While efficiency gains, market power, and financial matters can all be considered strategic motives, there are considerably more motives for airlines to acquire other airlines, especially from a resource point of view. Resources, such as technology, have implicitly been a prerequisite for many of the above-mentioned motives. In other words, efficiencies, market power, or financial matters do directly or indirectly require the associated resources. Nonetheless, various types of additional resources continue to be a driving force behind airline mergers and acquisitions.

Merkert and Morrell (2012) remark that the airline's home market may be experiencing slow growth, prompting the airline to apply for new markets geographically to achieve growth. Air Services Agreements may limit airlines' capabilities to open new routes internationally. Merging with international airlines may serve as a tool to obtain the required permits. In heavily congested markets, slots required to operate flights to airports are also among desirable assets for airlines. Merkert and Morrell do point out access to slots at London Heathrow airport as one of the motives for the mergers of Lufthansa and British Midland International, and later IAG and British Midland International. Yet, as noted before, antitrust authorities may order restrictions on slots in some circumstances.

Acquiring or merging with another airline obviously creates a larger organisation with more assets that can be used to achieve growth faster. In markets where demand is high, airlines may not be able to respond with adequate supply. As of early 2023, aircraft manufacturer Airbus has over 7000 single-aisle aircraft orders on its backlog (Airbus, 2023). Similarly, the other leading aircraft manufacturer Boeing has over 3500 single-aisle aircraft orders on its backlog (Boeing, 2022). The long queues for aircraft mean that airlines are not able to acquire new aircraft fast enough to meet the demand. Airlines may be able to lease or purchase used aircraft to compensate for a lack of capacity, but these are clearly not on the scale of resources received in a merger.

Besides aircraft, several other tangible and intangible resources are also acquired in M&As. These include, for example, human resources such as crew, maintenance, and operations personnel to cater the operations (Low & Lee, 2014). While airlines' motives often are to increase efficiencies by cutting out redundant personnel, M&As also serve as an effective way to quickly acquire more human resources to meet new requirements. Also, expertise to operate in different kinds of markets may be acquired in international mergers or acquisitions. M&As also give airlines access and the ability to combine loyalty and frequent flyer programmes. A combination of loyalty programmes along with high quality products and services are likely to retain and attract customers for airlines.

Finally, mergers and acquisitions typically provide the smaller counterpart with access to a more well-known brand. After some mergers, the airlines will continue to operate under their own identities, like in the case of Air France-KLM. However, in some instances, like in the merger of British Airways and British Midland International, the acquired airline is merged under the acquirer's identity. The acquired airline often enjoys the higher quality brand of the acquirer if they are merged under the same identity. A study by Koech et al. (2023) concludes that airline brand awareness is a significant driver for customers when choosing an airline, along with the likelihood that the customer chooses to fly with the same airline again. Furthermore, some airlines may have an excellent safety reputation, which could by itself prove to be a valuable asset. According to Low and Lee (2014), an excellent safety reputation has even enabled airlines to charge a premium to some extent.

4 POST-MERGER EFFECTS

While it is important to understand the motives that drive mergers and acquisitions, it is also important to examine whether the intended motives are realized after the merger or acquisition is conducted. This chapter aims to shed light on the observed synergies that were caught in past airline merger and acquisition cases and reflect on whether they have been successful. Besides synergies, the market power aspect is considered to determine whether airline M&As have had pro- or anti-competitive effects.

These aspects are primarily viewed from the perspectives of the companies themselves, but the effects of mergers and acquisitions on consumers are also considered. The effects on consumers are mainly examined from the perspectives of pricing and product quality, which contribute to the total theoretical effect on consumer welfare (Gayle & Thomas, 2015). A comparison is involved between M&As and strategic alliances to distinguish whether it is possible to achieve the effects already from alliances and to what extent.

Before examining the anticipated and realized synergies, the integration process is briefly stated as a prerequisite for the realization of synergies and other effects. Schosser and Wittmer (2015) investigate airline mergers and their expected and realized synergies using company reporting and calculations. The European merger of IAG estimated non-recurring integration costs at 350 million US dollars. Both IAG and Air France-KLM estimated that it would take five years to fully extract synergies from the mergers. The North American mergers of Delta/Northwest and United/Continental expect a shorter integration period of four years but at a much higher cost of one billion US dollars. It is therefore apparent that integration does require substantial effort and time to possibly realize the intended effects.

4.1 Expected versus realized synergies and efficiencies

Looking at anticipated synergies, European mergers had a more conservative estimate in terms of combined revenues than North American mergers. Based on company reporting, Air France-KLM reported a synergy estimation of 2.5% of combined revenues and IAG an estimation of 2.7% respectively. In North America,

Delta/Northwest expected synergies of 3.5% and United/Continental of 3.8% of combined revenues. (Mudde, 2017; Schosser & Wittmer, 2015.) Schosser and Wittmer find that the European airlines expect more cost synergies than revenue synergies, while the North American mergers expect the opposite; more revenue synergies than cost synergies. This signals that airlines in different geographical locations and contexts expect different sources of synergies.

Based on company reporting, Schosser and Wittmer (2015) conclude that all mergers achieved the expected synergies. Aligned with expectations, North American mergers seem to have been slightly faster at the realization. Air France-KLM realized the synergies in three years and Delta/Northwest in two years. However, considering IAG, the findings on realized cost versus revenue synergies are contrary to the expectations, as the European airline experienced higher revenue synergies than cost synergies in two years rather than vice versa. Similarly, United/Continental realized more cost synergies than revenue synergies in two years, contrary to the expectations. Mudde (2017) agrees and finds that United/Continental even accomplished more than double the expected synergies through improved efficiencies in flight operations and the elimination of excess capacity, resulting in better load factors. However, Mudde assesses that other factors affecting unit costs actually increased, causing a negative result. This seems to be a trend among airline mergers and acquisitions, at least within the integration period, as is discussed next.

When the unit costs and revenues are benchmarked against similar airlines within five years of the integration, Schosser and Wittmer (2015) find that Air France-KLM, IAG, and United/Continental experienced significant growth in unit costs. Furthermore, while the airlines also experienced an increase in unit revenues, the increase was relatively smaller than the growth in costs, resulting in less operational profit in comparison to the benchmark airlines within five years. Mudde (2017) similarly finds that United/Continental was able to increase its unit revenues while the unit costs also increased, causing it to lose economic value within four years of integration. Mudde finds no evidence of United/Continental using larger scale or bargaining power to reduce costs. Moreover, Choi (2017) finds United/Continental to experience a decrease in efficiency within five years of the integration. The Delta/Northwest merger is the only exception in the group as it experienced a reduction in costs while revenues

remained the same, yielding a faster growth in revenue when compared to benchmark airlines, according to Schosser and Wittmer.

The increases in unit costs initially when compared to the benchmark airlines may be due to friction in the integration process. Schosser and Wittmer (2015) point out that European airlines have the highest unit costs and revenues. As airlines have to compete internationally, Schosser and Wittmer suggest that, for European airlines, unit cost reduction is the more viable option to increase profitability due to the relative advantage. The anticipated synergies and company reporting by IAG (Merkert & Morrell, 2012) are in support of this, however, the realized synergies within the first five years contradict this. Schosser and Wittmer find that the European airlines actually had growing employee costs relative to the benchmark, thus indicating that perhaps the threats of strong labour unions or high wages may have realized and deterred the potential cost synergies. In North America, the merged airlines were able to cut selling and aircraft leasing costs, however, only Delta/Northwest was able to reduce unit costs in total within the initial integration period. United/Continental experienced a significant growth in fuel costs, which challenges the realization of economies of scale in fuel procurement. (Mudde, 2017; Schosser & Wittmer, 2015.)

A crucial factor in the evaluation of M&A results is to acknowledge that the effects may take a longer period of time to realize and that costs related to integration will likely constrain the profit margins. For example, Air France-KLM has decided to integrate the flight operations only after the initial integration period (Merkert & Morrell, 2012). Therefore, it is likely that, in this case, the network benefits will be realized later. Schosser and Wittmer (2012) acknowledge the time required for integration and speculate that cutting out redundancies and staff costs may eventually provide significant gains in efficiencies for IAG. Le and Yimga (2019) and Khezrimotlagh et al. (2022) do find evidence of improved efficiencies with newer data in the Delta/Northwest and United/Continental mergers. Additionally, Choi (2017) finds positive synergy effects in another American merger of AirTran and Southwest airlines. Finally, Barros et al. (2013) conclude that efficiency does tend to improve over time in the analysis of US-based airlines, confirming the time requirement to adapt operations, especially after a substantial change like a merger or acquisition.

The evaluation of singular components like staff and fuel procurement yielding synergies is challenging, and the total synergies remain disputed. The operations will take time to balance, and the positive effects of synergies are more likely to take place after the integration period. Additional evidence in support of realized efficiencies is the downward pressure on ticket fares, which is discussed in the next subchapter.

From a different viewpoint, Merkert and Morrell (2012) speculate on how the size of an airline may affect its efficiency. In this case, size is measured in terms of capacity offered, i.e., available seat kilometres (ASK). Available seat kilometres is a measurement of the number of seats in aircraft flown one kilometre, empty or occupied (Carlton et al., 2019). Sizing is a valuable factor to consider in an M&A and as noted, growth is often a key motive for mergers and acquisitions. However, size by itself is not a source for a more efficient airline, as is demonstrated next.

While too small (below 22 billion ASK) is likely to be inefficient, airlines could also become too big (above 100 billion ASK) to operate efficiently, and even resulting in diseconomies of scale (Merkert & Morrell, 2012). However, Schosser and Wittmer (2015) and Choi (2017) do not find this to be the case with Delta/Northwest as it significantly surpasses the threshold what Merkert and Morrell determined to be too big while still being efficient. Still, Choi does find decreasing returns to scale for Delta/Northwest and that United/Continental is scale inefficient in five years after the merger. Barros et al. (2013) inspect the three largest airlines in the United States, and while they confirm the efficiency of Delta, they find that a larger airline does not necessarily mean more efficient.

In conclusion, airline size in terms of available seat kilometres does not seem to imply efficiency and thus should not serve as a particular motive for a merger or acquisition, at least if the airline already offers more than 22 billion ASK. However, as pointed out, size may provide market power and economies of scale, and therefore those aspects should be evaluated separately. Interestingly, Min and Joo (2016) find that, also in the case of alliances, smaller alliances tend to outperform larger alliances in efficiency. They speculate that this may also be due to larger entities requiring more complex integration to realize the benefits, perhaps similar to larger cases of mergers and acquisitions.

The speculation on airlines' ability to extract synergies already from alliances as a mode of cooperation is mixed. Intuitively, codeshare flights would enable airlines to extract revenue synergies through higher utilization of aircraft. The European case of IAG does support that mergers and acquisitions provide higher synergies than alliances as British Airways and Iberia were part of the same alliance prior to the merger and still managed to extract revenue synergies (Merkert & Morrell, 2012). However, Barros et al. (2013) do not find evidence of codeshare benefits among US-based airlines. They suggest that this may be due to international codesharing playing a relatively minor role in the airlines' operations. Furthermore, Min and Joo (2016) do not find efficiency improvements in alliances as they speculate that differentiation in offerings might not be adequate. Schosser and Wittmer (2015) argue that alliances do yield synergies, especially revenue synergies, but just not to the extent of mergers and acquisitions.

Overall, it seems that alliances can provide enough benefits to be worth participating in. Besides codesharing, alliances provide other benefits for customers that improve product and service quality. These benefits are, for example, common frequent flyer programmes, access to lounges, and more straightforward ticket booking, which would likely encourage the customer to fly within the alliance. Yet, these benefits do not reach the scale of mergers and acquisitions.

4.2 Fares

Evidence from realized changes in fares that the customers face is mixed. The changes in fares are analysed from the perspectives of changes in market power that airlines exercise and gains in efficiencies that airlines achieve. The effects on competition will depend on the number of remaining competitors in the market after consolidation, while the threat of new entrants affects the competitive landscape too. As mentioned, should few competitors exist after a merger or acquisition, airlines have stronger market power to price their products. On the other hand, mergers or acquisitions could resurrect a struggling airline to become more competitive again, thus increasing the number of choices for consumers, which could have a downward pressure on prices. Additionally, gains in efficiencies may decrease the pricing for consumers while the airlines themselves could maintain the markups. Of course, besides market power and

efficiencies, other factors affect pricing too. Evidence of rising fares is considered first, after which decreasing fares are discussed.

Brueckner and Pels (2005), Hüscherlath and Müller (2015), Kim and Singal (1993), Kwoka and Shumilkina (2010), and Le and Yimga (2019) determine that airlines have exploited increased market power after mergers and find evidence of increased fares in past cases. Kwoka and Shumilkina research the merger of USAir and Piedmont. They find a significant pricing increase of 9% on routes that both airlines were serving before the merger and an increase of 5% on routes where the counterpart was a potential entrant. Hüscherlath and Müller find that after the merger of Delta/Northwest fares also initially increased by roughly 10%. However, over a longer term, the increases reduced to about 3%. Le and Yimga find that both the Delta/Northwest and United/Continental mergers resulted in slightly higher fares on routes where they were previously competing. Brueckner and Pels model the effects of the Air France-KLM merger and related alliances and find that they result in overall increases in fares. Brueckner and Pels acknowledge that efficiency gains are omitted from the modelling, thus potentially overestimating the effects or even resulting in an opposite conclusion.

As noted, efficiency gains may be achieved in M&As, thus reducing the effects of market power. Le and Yimga (2019) do not find increased market power in markets where Delta/Northwest and United/Continental did not compete previously. Yet, on routes where market power is exercised, both airlines managed to achieve relatively higher markups that did not directly transfer to the fares, which indicates of the existence of efficiencies. Furthermore, Le and Yimga observe reduced pricing on some routes. Kim and Singal (1993) are aligned with this assumption as they find that the efficiencies gained after the merger start to cancel out the effects of increased market power. Nonetheless, slightly increased pricing is still observed to remain in the study by Kim and Singal. The study by Hüscherlath and Müller (2015) confirms this outcome as the increased pricing decreased over time.

In light of these studies, customers face decreased welfare due to increased fares or decreased service with some above-mentioned expectations. These come partly as a result of airlines exercising market power. Product quality, which is discussed in the next subchapter, also contributes to the overall welfare change besides pricing

changes. However, these anti-competitive effects are mainly present on routes where the airlines had pre-existing competition, which the merger eliminated. Mergers do eliminate a potential entrant, but remaining barriers to entry need to be looked at separately to evaluate the lasting effect on competition. Additionally, gains in efficiencies are likely to make the effects of market power less significant. On the contrary to decreased welfare and anti-competitive effects, Carlton et al. (2019), Das (2019), and Dobson and Piga (2013) find pro-competitive effects and fare price reductions.

Carlton et al. (2019) research the mergers of Delta/Northwest, United/Continental and American Airlines with US Airways. They find that, in total, fares decreased by 6.3% compared to routes that were unaffected by the merger. Besides reductions in pricing, they find a substantial increase in capacity, especially on routes where the airlines were competing prior to the mergers. Das (2019) also finds that, after the merger of American Airlines and US Airways, significant reductions in pricing can be seen on routes between larger markets. However, Das observes increased pricing between smaller markets. It is therefore apparent that market size is likely an important factor that determines the pricing effects of a merger, besides efficiencies. Smaller markets have fewer competitors and usually higher barriers to entry. Larger markets are likely to have existing operations by multiple airlines, lowering the barriers to entry for routes affected by mergers. As noted, other factors affect pricing too, as is briefly demonstrated next.

Dobson and Piga (2013) research European acquisitions of Go Fly by Ryanair and Buzz by EasyJet. They find that, on average, customers face lower prices after the acquisitions. Ryanair and EasyJet are low-cost carriers, which means that low pricing is a fundamental factor in their business models and therefore may play a more substantial role in realized effects compared to legacy carriers. The price reductions come mainly from tickets that are booked early, while tickets that are booked close to the flight experience an increase in prices. This further demonstrates that pricing is determined by complex models and contexts. Dobson and Piga note that the acquiring airlines replace the business models of the acquired firms. Ryanair was able to realize the effects already within a year, indicating of a successful integration and efficiencies.

Besides decreasing prices, capacity also increased, further improving consumer welfare.

While some conclusions contradict each other, some distinguishing factors can be identified that may influence the observed effects. The cases that strictly indicate anti-competitive effects and increases in fares are quite old as the mergers took place in the 1980s (Kim & Singal, 1993; Kwoka & Shumilkina, 2010). Still, the elimination of new entrants likely remains a significant factor in support of anti-competitive effects. Additionally, the increased fares are most likely observed on routes that the counterparts were previously competing in. However, convincing evidence for pro-competitive effects and lower fares also exists. These results can be especially seen in newer data, which suggests that air travel markets have changed since and that efficiencies are realized over the longer term. The effects of gains in efficiencies are a crucial aspect to be considered as the outcome on fare pricing likely significantly depends on how much efficiencies are to be realized from mergers and acquisitions.

4.3 Product and service quality

The final point of view in the analysis of post-merger effects is the changes in product and service quality. Product and service quality is another key factor in the total effect on consumer welfare besides pricing (Gayle & Thomas, 2015). Product or service quality may decrease as customers have fewer options to switch to other providers, which lessens the incentives for airlines to make their services as desirable as possible. With less competition, airlines' competitive advantages are not threatened as easily. However, airlines could adopt the best practices of each airline to improve their products and services. Additionally, with new resources, merged airlines may be better able to manage problems. For example, should an aircraft be grounded, it is more easily replaced from a larger pool of aircraft to avoid cancellations. (Das, 2019.) Product and service quality are mainly examined from the perspective of flight networks and schedule punctuality.

Consumers and passengers prefer the shortest and non-stop flights for their journeys. Therefore, flight networks and routing serve as a measurement of product quality for airlines. Intuitively, the shorter and more straightforward the journey, the better the

product quality. (Chen & Gayle, 2019; Gayle & Thomas, 2015.) As mentioned, improved networks through new technologies and coordination of flights between the airlines are usually associated as a motive for airline mergers and acquisitions.

Chen and Gayle (2019) find that route quality slightly decreased on markets where the airlines were previously competing after the mergers of United/Continental and Delta/Northwest. This could be due to the airlines being less incentivised to offer direct routing instead of stop-over routes due to diminished competition. Stop-over routes may enable airlines to increase load factors, thus increasing efficiencies. On the other hand, Chen and Gayle observe an improvement in routing quality in markets where the airlines were not competitors. Furthermore, Gayle and Thomas (2015) observe improved routing quality on international routes after the mergers of United/Continental and Delta/Northwest.

Gayle and Thomas (2015) state that alliances provide an overall increase in routing quality. This could be an explanatory factor for the slightly decreased routing quality as United and Continental were in the same alliance before the merger, as were Delta and Northwest. On those occasions, network benefits may have already been extracted from the alliances. However, this is contrary to the study by Min and Joo (2016) who assess that airlines in alliances may not benefit from increased efficiencies or improved networks should they be geographically too similarly positioned.

Flight delays and cancellations contribute as a factor to the product and service quality of airlines. Das (2019) finds that after the merger of American and US Airways, the number of cancellations has decreased but delays have increased. Delays could occur as a result of higher load factors for example. Also, combined resources such as check-in desks and crew could cause friction with higher loads should redundancies be cut. On the contrary, merged airlines could shift their operations to less congested times, which could alleviate the likelihood of delays. (Prince & Simon, 2017.) Contrary to Das, Prince and Simon find only slightly worsened schedule punctuality in the short-term in the analysis of five US-based mergers. Furthermore, Prince and Simon expect improved punctuality in the longer term, which again could indicate of efficiencies achieved over time. The greatest modelled improvements are found on routes that both

airlines served prior to the mergers, which suggests that efficiencies are easily achieved through the elimination of redundancies, for instance.

Yet again, integration may be the cause for worse outcomes initially after the merger. Before sufficient integration, airlines may have conflicting policies, which could cause unsatisfactory circumstances for customers. Additionally, the merged airlines may not have yet coordinated the routes, which would hinder the anticipated network benefits. Similar reasons could be the cause for delays before the efficiencies and operations are integrated.

From the perspectives of networks and schedule punctuality, besides the flight frequencies that are mentioned in the last subchapter, customers may gain slightly higher welfare from product quality. While some factors such as concrete in-flight service satisfaction and cleanliness that contribute to product quality (Park et al., 2020) are omitted from this analysis, some implicit service changes happen after mergers or acquisitions.

For example, customers are able to book stopover flights to more destinations with greater ease due to new networks. Furthermore, as the flights are booked within the same airline rather than independent airlines, customers benefit from better cancellation coverages, and luggage can be checked in to the final destination right away. Such factors, along with combined frequent-flyer programmes, contribute to an increase in product quality. However, as noted, many of these factors can already be extracted from alliances. The total effects on welfare as a net result of changes in pricing and product quality are discussed in the next, concluding chapter.

5 CONCLUSIONS

Mergers and acquisitions (M&A) are a common occurrence among businesses, and airlines are no exception. The purpose of this study was to investigate the driving motives and resulting effects of airline mergers and acquisitions. The study built a theoretical framework around mergers and acquisitions, which was then applied to the airline context. The concluding chapter follows the same pattern: theoretical findings are discussed first, after which conclusions are made in the airline context and research questions are answered. Attention is paid to the implications not only from the perspective of the companies but also from the societal perspective. No study is complete without evaluating the limitations of the study and proposing research opportunities for the future, both of which are disclosed at the end.

Merger and acquisition motives are viewed from three different viewpoints in this study: a resource-based view, a market power view, and a financial standpoint. The resource-based theory consists of the most efficient use of the resources that a firm has. Resources are not only tangible assets like equipment but also human capital, knowledge, and organizational structures. Market power consequently considers a firm's position relative to its competitive environment. Depending on its market power, a firm can, for example, exercise price setting and bargaining power over suppliers.

In this study, financial and strategic motives were considered from the perspectives of growth and stability. Mergers and acquisitions enable rapid growth but can also be used to save a financially distressed firm. However, mergers and acquisitions as a risk-reduction strategy remain inconclusive. Throughout the evaluation of motives and results, it is important to keep in mind that geographical differences do exist.

These viewpoints are interlinked. For example, efficiencies can enable a firm to streamline its operations, thus improving cash flows. Higher cash flows increase shareholder value or at least improve the firm's financial stance. Efficiencies can be achieved through new or complementary resources that may be acquired from other firms. Alternatively, an acquisition of a competitor enables a firm to exercise greater bargaining power, which could reduce the costs of raw materials, again increasing

profit margins. Mergers and acquisitions are never based on a single motive but rather on a complex combination of different motives and effects in order to achieve a sustainable competitive advantage. This makes the evaluation and estimation of results from mergers and acquisitions challenging. Additionally, integration processes that happen after the transactions are completed are also demanding. Integration is required to extract the new possibilities and benefits from the deal, besides minimizing any negative effects that may follow.

From a societal point of view, mergers or acquisitions could induce anti-competitive effects. These effects could manifest as higher prices or lower quality products. Additionally, employees could be forced to switch to a worse contract in the new firm or be laid off due to the company eliminating redundancies. Of course, mergers and acquisitions cause a vast number of other externalities too. These include, for example, environmental implications through new equipment or expanding operations into new regions. Further theoretical implications include the larger institution's ability to transform regulation and whether M&As are conducted in the interests of management and shareholders. Yet they can also have positive intentions, which are discussed next.

Mergers and acquisitions may enable firms to acquire new technologies to improve and develop new, higher-quality products, thus improving consumer welfare. Should significant efficiencies be gained, they may result in lower prices while the company can still maintain the margins. If bankruptcy is avoided, employees may keep their jobs, and other investors could avoid credit losses. However, excessive market power is more likely to create the above-mentioned negative effects. Indeed, the Department of Justice states that "... mergers should not be permitted to create, enhance, or entrench market power or to facilitate its exercise." (U.S. Department of Justice and the Federal Trade Commission, 2010). It is up to the antitrust authorities to assess the likely effects of these transactions and either approve or reject the transaction. It is also possible to impose specific conditions on the transactions.

Prior to answering the first research question, which focuses on the post-merger effects, the motives for airline mergers and acquisitions are investigated, which answers the second research question. Airlines seek to improve operational efficiency and synergies through economies of scale and market power. For example, materials

like fuel and spare parts can potentially be purchased at a lower price in larger quantities, which can be further magnified by greater market power. Mergers and acquisitions enable cutting out redundancies, for example, personnel in customer service or maintenance. Other supporting functions like booking services and IT-systems can also be combined with more efficient operations in mind.

Airline mergers and acquisitions enable broader flight networks. Besides a larger offering of destinations, airlines can better combine and harmonize schedules to lower stop-over times and enable more destinations via connecting flights. On the other hand, airlines can cut out excess capacity on routes, which could increase load factors and further improve efficiencies. Consequently, reducing output has an anti-competitive effect that could harm customers for the benefit of the airline. Exercise of market power does remain a motive, as airlines want to make competitive environments more favourable for them and eliminate potential entrants.

Private businesses' number one goal, profit maximization, can be considered as the core motive. These tools can help achieve a competitive advantage and promote financial gains. As for the first research question, the realization of these effects is not as straightforward. While airlines report the realization and often the exceeding of synergies, the cash flows are often not in the favour of the airline, especially within the first years of the mergers. Previous mergers, such as Air France-KLM and United/Continental, had a negative net effect on unit costs. However, there have also been positive outcomes, such as Ryanair's ability to quickly benefit from its acquisition. The negative effects are likely at least partially to be due to friction in the integration process, and more importantly, efficiencies are gained in the long term. It is also evident that size itself does not necessarily mean a more efficient airline.

The study makes the theoretical contribution that unit revenues within airlines are likely to decrease within the first years of integration following M&As but are expected to increase in the long-term, as is shown in figure 1. This viewpoint incorporates Mudde's (2017) and Schosser and Wittmer's (2015) observations from the first years after the mergers. It also agrees with the findings by Khezrimotlagh et al. (2022) and Le and Yimga (2019) on longer-term increased efficiencies. However, a

small disagreement is made between this study and the paper by Barros et al. (2013), as increased unit revenues are predicted over time despite the size of the airlines.

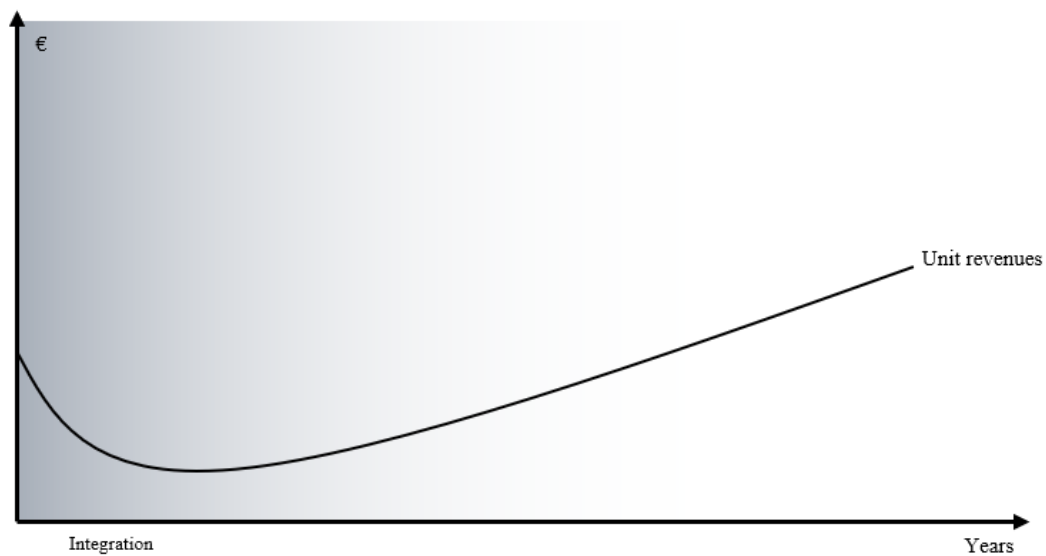


Figure 1. Airline unit revenues over time following mergers and acquisitions.

Figure 1 qualitatively illustrates the expected progression of unit revenues, beginning from the moment of the transaction. It does not make the values of the axes explicit, as they vary between airlines. However, the integration period usually lasts between one to five years for airlines (Dobson & Piga, 2013; Schosser & Wittmer, 2015). The unit revenues are not valued for the same reason; it is challenging to measure the actual monetary values during integration, and they are also completely dependent on the specific airline.

Should the primary motive be to heal a financially troubled airline, the management must consider whether the airline can bear not only the costs directly linked to the integration, but also the inefficiencies and increases in unit costs that are likely to follow within the first years after the merger. Unexpected costs may also occur from mergers that the company must be able to withstand. For example, when US Airways and America West merged, the company encountered a total IT-system failure, which obviously resulted in significant costs (Merkert & Morrell, 2010). It therefore is evident that M&As also do pose a risk for an airline to run into a deeper trouble.

It seems that the motives and expectations may be a little too optimistic, especially from the perspective of the company. Investors also seem exceptionally positive about mergers and acquisitions. Although airline mergers and acquisitions have not had disastrous outcomes, they are not an exception to the widely held belief that most mergers and acquisitions may fail. Yet, the evaluation of mergers and acquisitions is not as simple as deeming them a success or failure, and many considered airline M&As have had beneficial outcomes, especially over time.

Of course, what can be considered a failure has the potential to magnify negative effects on other stakeholders, and antitrust authorities should not rely on company estimates of the outcomes. Additionally, not nearly all effects are purely financial. For example, if an airline receives newer aircraft through an acquisition, it can retire older aircraft if the capacity is not needed. Newer and more efficient aircraft have a lower environmental impact, which is obviously a good thing.

From the perspective of consumer welfare, the results do tend to lean on the positive side. While in some cases customers do face higher fares for tickets, it certainly is not the rule. Market power, or a lack of competition, does put upward pressure on prices. However, gains in efficiencies for airlines offset that effect, particularly after the first few years. Indeed, reductions in fares are also observed. The pricing of tickets is a complex sum of factors, and the observed deviations are likely to vary even within the same airline.

The study makes another theoretical contribution to the literature by examining the connection between the gains in efficiencies and increased market power. The gains in efficiencies are likely to offset the effects of market power, further confirming that efficiencies are gained over time. This assumption does extend the view of the paper by Hüscherlath and Müller (2015), who do observe the diminishing of increased prices. The findings of this study speculate that the gains in efficiencies may even overturn the effects of market power, thus being an explanatory factor for the decreased prices.

Besides pricing, product quality is also considered through an evaluation of the number of delays and cancellations. Some upward trends in delays can be seen, but the number of cancellations is decreasing. In conclusion, customers are more likely to get to their

destinations, albeit with a higher possibility of delay. In combination with the changes in fares, consumers may be better off after the mergers, provided that competition does not decrease unduly. Therefore, this study joins the theoretically positive view of consumer welfare through the evaluation of newer circumstances, sharing similar views with Carlton et al. (2019), Das (2019), and Dobson and Piga (2013). However, it certainly does not dismiss the conditions related to competition observed by, for example, Fridolfsson and Stennek (2005) and Kim and Singal (1993).

Overall, the study can aid antitrust authorities and airline decision-making as it gives a brief overview of factors that can affect mergers and change after the transactions are complete. This study adds to the literature by taking a broader look at airline mergers and acquisitions by investigating the motives and consequences from multiple perspectives both before and after the merger. It benefits from general M&A theories and applies them to the airline industry while examining past case examples.

Yet, it does have a number of limitations. First, it is based mainly on a small number of cases and therefore may not give a very reliable estimation of possible results. The current context and circumstances of upcoming cases are likely to affect the outcomes of those particular cases. Additionally, as it looks to give a brief overview of many different viewpoints, it does not provide a very detailed description of any specific component. Some factors, like business models and particular competitive environments, are mostly omitted from the analysis, which certainly can affect the results.

These do present an intriguing opportunity for future research. For example, a quantified analysis of the specific factors, such as competitive environments and effects on staff, would provide valuable insights and give a more accurate estimation of the outcomes. As found, integration can also have an adverse effect on the results of mergers and acquisitions. Research and a better understanding of the process could be used to realize the positive effects more swiftly and avoid negative outcomes in the airline context. In other words, an analysis of how well the motives can be realized would be beneficial as they influence upcoming mergers and acquisitions.

REFERENCES

- Airbus. (2023). Orders and deliveries. Retrieved 8.3.2023 from <https://www.airbus.com/en/products-services/commercial-aircraft/market/orders-and-deliveries>
- Amihud, Y., DeLong, G. L., & Saunders, A. (2002). The effects of cross-border bank mergers on bank risk and value. *Journal of International Money and Finance*, 21(6), 857–877. [https://doi.org/10.1016/S0261-5606\(02\)00026-8](https://doi.org/10.1016/S0261-5606(02)00026-8)
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99. <https://doi.org/10.1177/014920639101700108>
- Barros, C. P., Liang, Q. Bin, & Peypoch, N. (2013). The technical efficiency of US Airlines. *Transportation Research Part A: Policy and Practice*, 50, 139–148. <https://doi.org/10.1016/J.TRA.2013.01.019>
- Boeing Company. (2022). Investors - Fact Sheets. Retrieved 8.3.2023 from <https://investors.boeing.com/investors/fact-sheets/default.aspx>
- Brueckner, J. K., & Pels, E. (2005). European airline mergers, alliance consolidation, and consumer welfare. *Journal of Air Transport Management*, 11(1), 27–41. <https://doi.org/10.1016/J.JAIRTRAMAN.2004.11.008>
- Carlton, D., Israel, M., MacSwain, I., & Orlov, E. (2019). Are legacy airline mergers pro- or anti-competitive? Evidence from recent U.S. airline mergers. *International Journal of Industrial Organization*, 62, 58–95. <https://doi.org/10.1016/J.IJINDORG.2017.12.002>
- Chen, Y., & Gayle, P. G. (2019). Mergers and product quality: Evidence from the airline industry. *International Journal of Industrial Organization*, 62, 96–135. <https://doi.org/10.1016/J.IJINDORG.2018.02.006>
- Chen, Z., & Tan, J. (2011). Does bancassurance add value for banks? – Evidence from mergers and acquisitions between European banks and insurance companies. *Research in International Business and Finance*, 25(1), 104–112. <https://doi.org/10.1016/j.ribaf.2010.08.002>
- Choi, K. (2017). Multi-period efficiency and productivity changes in US domestic airlines. *Journal of Air Transport Management*, 59, 18–25. <https://doi.org/10.1016/J.JAIRTRAMAN.2016.11.007>

- Cooper, S. C., Pereira, V., Vrontis, D., & Liu, Y. (2023). Extending the resource and knowledge based view: Insights from new contexts of analysis. *Journal of Business Research*, *156*, 113523. <https://doi.org/10.1016/j.jbusres.2022.113523>
- Das, S. (2019). Effect of Merger on Market Price and Product Quality: American and US Airways. *Review of Industrial Organization*, *55*(3), 339–374. <https://doi.org/10.1007/s11151-019-09717-2>
- Devos, E., Kadapakkam, P.-R., & Krishnamurthy, S. (2009). How Do Mergers Create Value? A Comparison of Taxes, Market Power, and Efficiency Improvements as Explanations for Synergies. *The Review of Financial Studies*, *22*(3), 1179–1211. <https://doi.org/10.1093/rfs/hhn019>
- Dobson, P. W., & Piga, C. A. (2013). The impact of mergers on fares structure: Evidence from european low-cost airlines. *Economic Inquiry*, *51*(2), 1196–1217. <https://doi.org/10.1111/j.1465-7295.2011.00392.x>
- Evripidou, L. (2012). M&As in the airline industry: Motives and systematic risk. *International Journal of Organizational Analysis*, *20*(4), 435–446. <https://doi.org/10.1108/19348831211268625>
- Fridolfsson, S.-O., & Stennek, J. (2005). Hold-up of anti-competitive mergers. *International Journal of Industrial Organization*, *23*(9), 753–775. <https://doi.org/10.1016/j.ijindorg.2005.08.002>
- Garfinkel, J. A., & Hankins, K. W. (2011). The role of risk management in mergers and merger waves. *Journal of Financial Economics*, *101*(3), 515–532. <https://doi.org/10.1016/j.jfineco.2011.03.011>
- Gayle, P. G., & Thomas, T. (2015). Product Quality Effects of International Airline Alliances, Antitrust Immunity, and Domestic Mergers. *Review of Network Economics*, *14*(1), 45–74. <https://doi.org/10.1515/rne-2015-0026>
- Georgios, K., & Georgios, H. (2011). Du Pont Analysis of a Bank Merger and Acquisition between Laiki Bank from Cyprus and Marfin Investment Group from Greece. Is there an increase of profitability of the new bank? Kyriazopoulos Georgios Applicant Professor of Financial Management of Technological Educational Institution of Western Macedonia. *MIBES International Conference*.
- Goolsbee, A., & Syverson, C. (2008). How Do Incumbents Respond to the Threat of Entry? Evidence from the Major Airlines. *The Quarterly Journal of Economics*, *123*(4), 1611–1633. <http://www.jstor.org.pc124152.oulu.fi:8080/stable/40506218>

- Hankir, Y., Rauch, C., & Ueber, M. P. (2011). Bank M&A: A market power story? *Journal of Banking & Finance*, 35(9), 2341–2354. <https://doi.org/10.1016/J.JBANKFIN.2011.01.030>
- Ho, C. Y., McCarthy, P., & Wang, Y. (2021). Competition and countervailing power: Evidence from the China Eastern and Shanghai Airlines merger. *Journal of Air Transport Management*, 91, 101990. <https://doi.org/10.1016/J.JAIRTRAMAN.2020.101990>
- Hsu, C. P., & Flouris, T. (2017). Comparing global airline merger experiences from a financial valuation perspective: an empirical study of recent European based airline mergers. *Transportation Research Procedia*, 25, 41–50. <https://doi.org/10.1016/J.TRPRO.2017.05.198>
- Hüschelrath, K., & Müller, K. (2015). Market Power, Efficiencies, and Entry Evidence from an Airline Merger. *Managerial & Decision Economics*, 36(4), 239–255. <https://doi.org/10.1002/mde.2664>
- Khezrimotlagh, D., Kaffash, S., & Zhu, J. (2022). U.S. airline mergers' performance and productivity change. *Journal of Air Transport Management*, 102, 102226. <https://doi.org/10.1016/J.JAIRTRAMAN.2022.102226>
- Kim, E. H., & Singal, V. (1993). Mergers and market power: Evidence from the airline industry. *American Economic Review*, 83(3), 549. <https://www.jstor.org/stable/2117533>
- Koehn, A. K., Buyle, S., & Macário, R. (2023). Airline brand awareness and perceived quality effect on the attitudes towards frequent-flyer programs and airline brand choice - Moderating effect of frequent-flyer programs. *Journal of Air Transport Management*, 107, 102342. <https://doi.org/10.1016/J.JAIRTRAMAN.2022.102342>
- Kwoka, J., & Shumilkina, E. (2010). THE PRICE EFFECT OF ELIMINATING POTENTIAL COMPETITION: EVIDENCE FROM AN AIRLINE MERGER. *Journal of Industrial Economics*, 58(4), 767–793. <https://doi.org/10.1111/j.1467-6451.2010.00433.x>
- Le, H. B., & Yimga, J. (2019). Market Power and Marginal Cost Effects in Competing Markets: Evidence from Airline Mergers. *Review of Network Economics*, 18(2), 63–108. <https://doi.org/10.1515/rne-2018-0024>
- Lee, J. W. (2021). Government Bailouts of Airlines in the COVID-19 Crisis: Improving Transparency in International Air Transport. *Journal of International Economic Law*, 24(4), 703–723. <https://doi.org/10.1093/jiel/jgad002>

- Low, J. M. W., & Lee, B. K. (2014). Effects of internal resources on airline competitiveness. *Journal of Air Transport Management*, 36, 23–32. <https://doi.org/10.1016/J.JAIRTRAMAN.2013.12.001>
- Merkert, R., & Morrell, P. S. (2012). Mergers and acquisitions in aviation – Management and economic perspectives on the size of airlines. *Transportation Research Part E: Logistics and Transportation Review*, 48(4), 853–862. <https://doi.org/10.1016/J.TRE.2012.02.002>
- Min, H., & Joo, S. J. (2016). A comparative performance analysis of airline strategic alliances using data envelopment analysis. *Journal of Air Transport Management*, 52, 99–110. <https://doi.org/10.1016/J.JAIRTRAMAN.2015.12.003>
- Morrell, P. S. (2007). *Airline Finance: Vol. 3rd ed.* Aldershot: Ashgate Publishing Ltd. <https://doi.org/10.4324/9781351163163>
- Morrish, S. C., & Hamilton, R. T. (2002). Airline alliances—who benefits? *Journal of Air Transport Management*, 8(6), 401–407. [https://doi.org/10.1016/S0969-6997\(02\)00041-8](https://doi.org/10.1016/S0969-6997(02)00041-8)
- Moss, D. L. (2013). Delivering the Benefits? Efficiencies and Airline Mergers. *American Antitrust Institute*. <http://dx.doi.org/10.2139/ssrn.2547673>
- Mudde, P. A. (2017). Using Variance Analysis to Evaluate M&A performance: examining positive and negative synergies in United’s acquisition of Continental. *Journal of Management Policy & Practice*, 18(3), 28–43. <http://pc124152.oulu.fi:8080/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=129222612&site=ehost-live&scope=site>
- Németh, A., & Niemeier, H. M. (2012). Airline mergers in Europe – An overview on the market definition of the EU commission. *Journal of Air Transport Management*, 22, 45–52. <https://doi.org/10.1016/J.JAIRTRAMAN.2012.01.008>
- OneWorld. (2023). Member Airlines. Retrieved 9.3.2023 from <https://www.oneworld.com/members>
- Park, S., Lee, J. S., & Nicolau, J. L. (2020). Understanding the dynamics of the quality of airline service attributes: Satisfiers and dissatisfiers. *Tourism Management*, 81, 104163. <https://doi.org/10.1016/J.TOURMAN.2020.104163>
- Pastena, V., & Ruland, W. (1986). The Merger/Bankruptcy Alternative. *The Accounting Review*, 61(2), 288–301. <http://www.jstor.org.pc124152.oulu.fi:8080/stable/247259>

- Prince, J. T., & Simon, D. H. (2017). The Impact of Mergers on Quality Provision: Evidence from the Airline Industry. *The Journal of Industrial Economics*, 65(2), 336–362. <https://doi.org/10.1111/joie.12136>
- Sacui, V., & Maticiuc, M. D. (2020). The Sources of Revenue Synergies in Mergers & Acquisitions. *Review of International Comparative Management / Revista de Management Comparat International*, 21(4), 592–602. <https://doi.org/10.24818/RMCI.2020.4.592>
- Schossler, M., & Wittmer, A. (2015). Cost and revenue synergies in airline mergers – Examining geographical differences. *Journal of Air Transport Management*, 47, 142–153. <https://doi.org/10.1016/J.JAIRTRAMAN.2015.05.004>
- Shahrur, H. (2005). Industry structure and horizontal takeovers: Analysis of wealth effects on rivals, suppliers, and corporate customers. *Journal of Financial Economics*, 76(1), 61–98. <https://doi.org/10.1016/j.jfineco.2004.01.001>
- Shrieves, R. E., & Stevens, D. L. (1979). Bankruptcy Avoidance as a Motive for Merger. *The Journal of Financial and Quantitative Analysis*, 14(3), 501–515. <https://doi.org/10.2307/2330183>
- Siegmund, F. (1990). Competition and performance in the airline industry. *Policy Studies Review*, 9(4), 649–663. <https://doi.org/10.1111/J.1541-1338.1990.TB01071.X>
- Singal, V. (1996). Airline Mergers and Competition: An Integration of Stock and Product Price Effects. *The Journal of Business*, 69(2), 233–268. <http://www.jstor.org/pc124152.oulu.fi:8080/stable/2353465>
- SkyTeam. (2023). Our Members. Retrieved 9.3.2023 from <https://www.skyteam.com/en/about/our-members>
- Star Alliance. (2023). Members. Retrieved 9.3.2023 from <https://www.staralliance.com/en/members>
- Suau-Sanchez, P., Burghouwt, G., & Fageda, X. (2016). Reinterpreting EU Air Transport Deregulation: A Disaggregated Analysis of the Spatial Distribution of Traffic in Europe, 1990-2009. *Tijdschrift Voor Economische En Sociale Geografie (Journal of Economic & Social Geography)*, 107(1), 48–65. <https://doi.org/10.1111/tesg.12133>
- Tanriverdi, H., & Venkatraman, N. (2005). Knowledge relatedness and the performance of multibusiness firms. *Strategic Management Journal*, 26(2), 97–119. <https://doi.org/10.1002/smj.435>

- Tsang, E. W. K. (1998). Motives for strategic alliance: A resource-based perspective. *Scandinavian Journal of Management*, 14(3), 207–221. [https://doi.org/10.1016/S0956-5221\(97\)00036-5](https://doi.org/10.1016/S0956-5221(97)00036-5)
- U.S. Department of Justice and the Federal Trade Commission. (2010). Horizontal Merger Guidelines (08/19/2010). Retrieved 5.4.2023 from <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010>
- Vallascas, F., & Hagendorff, J. (2011). The impact of European bank mergers on bidder default risk. *Journal of Banking & Finance*, 35(4), 902–915. <https://doi.org/10.1016/j.jbankfin.2010.09.001>
- Van Horne, J. C., & Wachowicz, J. J. M. (2008). *Fundamentals of Financial Management* (13th ed.). Harlow: Pearson Education Limited.
- Wheelen, T. L., Hunger, J. D., Hoffman, A. N., & Bamford, C. E. (2015). *Strategic Management and Business Policy* (14th ed.). Harlow: Pearson Education Limited.
- Zhang, Y., & Round, D. K. (2008). China's airline deregulation since 1997 and the driving forces behind the 2002 airline consolidations. *Journal of Air Transport Management*, 14(3), 130–142. <https://doi.org/10.1016/J.JAIRTRAMAN.2008.03.001>